CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.01/KRIDL/CSR-01/726/CEMENT/2014-15 Date: 06.01.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager,** KRIDL, Bangalore.
*NAME OF THE WORK	:	Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015
SAMPLE ID	:	Cement – Sample 2
SAMPLE RECEIVED ON	:	05.01.2015
PERIOD OF TESTING	:	05.01.2015 to 06.01.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	465 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.01/KRIDL/CSR-01/726/SAND-Gradation/2014-15 : 06.01.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager,** KRIDL, Bangalore.
* Name of Work	: Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015
Technical Reference	: IS : 2386 Part I - 1963 RA-2007
Sample ID	: Fine Aggregates - Sample 2
Sample Received on	: 05.01.2015
Date of Testing	: 06.01.2015

Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.20	90-100	90-100	90-100	95-100
2.36	78.90	60-95	75-100	85-100	95-100
1.18	58.10	30-70	55-90	75-100	90-100
600 Micron	40.50	15-34	35-59	60-79	80-100
300 Micron	12.60	5-20	8-30	12-40	15-50
150 Micron	1.90	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

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Job No.: CTCE/BBMP/W.No.01/KRIDL/CSR-01/726/AGG/GR/2014-15 : 06.01.2015

TEST REPORT ON COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager,** KRIDL, Bangalore.
* Name of Work	: Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm) - Sample 2
Sample Received on	: 05.01.2015
Date of Testing	: 06.01.2015

Total Wt. of Aggregates in gms= 10000

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.48	95-100	85-100
20	50.59	30-70	0-20
10	13.47	10-35	0-5
4.75	2.22	0-5	-

Civil-Tech Consultants & Engineers Bangalore

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.01/KRIDL./STEEL/2014-15 06.01.2015

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	:	Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015
Date of Test	:	06.01.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per meter (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	516	559	13.45	O.K	O.K

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No: CTCE/BBMP/W.No.01/KRIDL/WMM/Gradation/2014-15

06.01.2015

GRADATION FOR WMM
MORTH TABLE-400-II

Client : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore

Name of Work : Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015

Date of Testing : 06.01.2015

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): 25675

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	658	658	2.6	97.4	95-100
22.4	4672	5330	20.8	79.2	60-80
11.2	7513	12843	50.0	50.0	40-60
4.75	5269	18112	70.5	29.5	25-40
2.36	3148	21260	82.8	17.2	15-30
0.600	2153	23413	91.2	8.8	8-22
0.075	1937	25350	98.7	1.3	0-8

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Job No.: CTCE/BBMP/W.No.01/KRIDL/CSR-01/726/CUBE/2014-15 22.01.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: Technical Manager, KRIDL, Bangalore.
* Name of the work	: Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015
* Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day
Sample Received on	: 21.01.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.01.2015	22.01.2015	8.118	353.6	15.72
2	15.01.2015	22.01.2015	8.215	375.1	16.67
3	15.01.2015	22.01.2015	8.324	386.5	17.18

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Job No.: CTCE/BBMP/W.No.01/KRIDL/SDBC/Bitumen/2014-15 16.01.2015

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	Technical Manager, KRIDL, Bangalore.
NAME OF THE WORK	Construction of drains and Improvements to roads at Lake View Layout in Ward No. 01 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	AEE/BBMP/YSD/AE-1/2014-15 Dated: 05.01.2015
SAMPLE I/D	Roads at Lake View Layout in Ward No. 01
DATE OF TESTING	16.01.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	474
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	26.00
7. Bitumen content in %	5.00	5.20
8. Average	5.10	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	25.83	5.44	5.44	94.56	90-100
4.75	246.23	51.84	57.28	42.72	35-51
2.36	53.56	11.28	68.55	31.45	24-39
1.18	51.37	10.81	79.37	20.63	15-30
0.3	36.48	7.68	87.05	12.95	9-19
0.075	38.52	8.11	95.16	4.84	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	26.51	5.30	5.30	94.70	90-100
4.75	243.85	48.77	54.07	45.93	35-51
2.36	87.96	17.59	71.66	28.34	24-39
1.18	46.39	9.28	80.94	19.06	15-30
0.3	25.81	5.16	86.10	13.90	9-19
0.075	43.19	8.64	94.74	5.26	3-8

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